REMARKS

Applicants gratefully acknowledge the withdrawal of the previous office action in response to the pre-appeal brief request for review filed July 3, 2006.

Claims 1-20 are currently pending in the application. Claims 1-20 stand rejected pursuant to 35 U.S.C. § 103(a) as unpatentable over U.S. Patent Application No. 20050261986 to Haynes et al. in view of U.S. Patent Application No. 20020013815 to Obradovich et al. Applicants traverse as discussed below.

The Claimed Invention

The claimed invention provides a rental car system in which cars are operated by digital keys instead of conventional keys and in which, among other things, there is no need for a data communication link between a rental car and a central station (Claim 1, lines 9-10; Claim 11, lines 11-12) or for transaction-by-transaction reprogramming of a rental car's reader. Each car is capable of invalidating a digital key at the end of a rental period.

As shown in Figure 1, the claimed invention includes a computing system 10, a portable storage device 12, and an access control device 14 with an interface 16 to a portable storage inside a rental car 160. The computing system 10 is used to make reservations and to create and store the digital keys used to enable operation of a rental cars 160. The computing system 10 can connect to a central reservation server 110 via a network 120, which may be the Internet. The computing system 10 may be provided with a way to download a digital key to a portable storage device 12, which may take the form of a smart card issued by the car rental agency, a personal digital assistant, a memory card, or a diskette. The renter may bring a portable storage device 12 containing a digital key to a rental car 160 equipped with an access control device 14 capable of reading the digital key from the portable storage device 12 and, upon authentication of the digital key by the access control device, enable operation of the rental car 160. Upon return, the rental car 160 invalidates the digital key so that it no longer starts the car, and the renter

may present the invalidated digital key to a central station of the car rental system. The digital key may be contained on a storage device provided by the renter rather than the car rental company.

Rejection of Claims 1-20 Under 35 U.S.C. § 103(a)

The Examiner rejected Claims 1-20 under 35 U.S.C. § 103(a), citing U.S. Patent Application No. 20050261986 to Haynes et al. in view of U.S. Patent Application No. 20020013815 to Obradovich et al. These references do not suggest the claimed invention for a variety of reasons. For example, the base claims require that "there exists no data communications link between the fleet of cars and the management system" (Claim 1, lines 9-10) and that a digital key make it possible "to gain access to a rental car without communication between the rental car and the reservation server." (Claim 11, lines 11-12) These requirements are inconsistent with the teaching of Obradovich et al. that "[t]he host computer transmits all of the E-card information to the automobile system in the subject vehicle via a wireless communications connection." (Obradovich et al., paragraph 106, relied on in the Office Action at 3, 5, 6, 8, and 9) As a result, Obradovich et al. cannot suggest the claimed invention.

Claim 1

Applicants traverse the rejection of independent Claim 1 on the basis that the Examiner has incorrectly found the requirements of Claim 1 to be suggested by Haynes et al. in view of Obradovich et al.

In addition, the Examiner does not address the requirement "wherein there exists no data communication link between the fleet of cars and the management system" (Claim 1, lines 9-10), which is not suggested by either Haynes et al. or Obradovich et al. For example, as noted above, Obradovich et al. expressly teach, "[t]he host computer transmits all of the E-card information to the automobile system in the subject vehicle via a wireless communications connection" (Obradovich et al., paragraph 106) in a passage

relied on by the Examiner in support of rejection. (Office Action at 3)

The Examiner has incorrectly determined that Haynes et al. teach the requirement of Claim 1 for

> a fleet of cars, each of which is operable only when a valid digital key is presented to the car, and each of said fleet of cars being capable of invalidating a digital key.

(Claim 1, lines 2-3) Haynes et al. do not teach a digital key but instead teach a system for renting and towing trucks which includes:

> [A] computer-based system for renting trucks, the improvement of a memory in which is stored a data set relating to vehicle pick-up and drop-off locations and programming responsive to a user input identifying a geographical location in which the vehicle is to be picked up and a geographical location in which the vehicle is to be dropped off which accesses the memory and provides to the user computer over the communications network data indicating at least two locations closest to the geographic location input for pick-up and at least two locations nearest to the geographic location input for drop-off.

(Haynes et al., paragraph 0017, relied on in the Office Action at 2)

Nor do Haynes et al. teach "a management system for handling reservation and car return." (Claim 1, line 4) (emphasis added) The portion of the disclosure of Haynes et al. cited in support of rejection teaches reservations for renting trucks without any discussion of truck returns. (Haynes et al., paragraph 0020, relied on in the Office Action at 2)

Furthermore, Haynes et al. do not teach "a key generation system for generating digital keys for renters of the car rental system" of "a key return system for processing digital keys returned by renters." (Claim 1, lines 6-8) Instead, the portion of Haynes et al. relied on by the Examiner in support of rejection teaches the online processing of truck rental reservations, without any discussion of the generation or processing of digital keys. (Haynes et al., paragraphs 0076-79, relied on in the Office Action at 3)

Recognizing that Haynes et al. do not teach or disclose "invalidating a digital key," the Examiner has relied upon Obradovich et al. to make up for the deficiency. The portion of Obradovich et al. relied on by the Examiner, however, does not teach invalidation of a digital key but instead teaches entry of an access code in order to use a rented vehicle. (Obradovich et al., paragraph 0106, cited in the Office Action at 3)

Thus, a combination of Haynes et al. with Obradovich et al. would not result in Claim 1.

Claims Depending from Claim 1

Applicants traverse the rejection of dependent Claims 2-10 on the basis that the claims should be allowed as depending from allowable Claim 1. Additional grounds for traversing the rejection of Claims 2-10 are discussed below.

Regarding Claim 2, the Examiner has incorrectly determined that Haynes et al. suggest

> a parking lot guarded by a security gate, said fleet of cars being parked within confines of said parking lot when not rented by a renter of the car rental system, said security gate only opening when a valid digital pass is presented by a renter of the car rental system.

(Claim 2, lines 1-4) To the contrary, however, the portion of the disclosure of Haynes et al. cited in support of rejection teaches an Internet-based truck reservation system and makes no mention of the rental car security features required by Claim 2. (Haynes et al., paragraphs 0009-10, relied on in the Office Action at 3)

Regarding Claim 3, the Examiner has incorrectly determined that Haynes et al. suggest

> wherein the management system is accessed by a prospective renter over a network and the prospective renter is given a digital key to operate a particular car and a digital pass to open the gate of the parking lot where said particular car is parked, after said prospective renter completes a

reservation for said particular car, said digital key and digital pass being effective starting from the time specified by said reservation.

(Claim 3, lines 1-6) By contrast, the portion of the disclosure of Haynes et al. relied on in support of rejection teaches the making of truck rental reservations over the Internet. (Haynes et al., paragraphs 0017-19, relied on in the Office Action at 4)

Regarding Claim 4, the Examiner has incorrectly determined that Haynes et al. suggest the requirement, "wherein the prospective renter accesses the management system at a kiosk located in the parking lot where the particular car is parked." (Claim 4, lines 1-3) The portion of the disclosure of Haynes et al. cited in support of rejection, however, does not teach Claim 4's requirement for accessing a management system at a kiosk located in a parking lot. (Haynes et al., paragraph 0023, relied on in the Office Action at 4)

Regarding Claim 5, the Examiner has incorrectly determined that Haynes et al. suggest the requirement, "wherein the prospective renter accesses the management system over the Internet." (Claim 5, lines 1-2) Haynes et al. do not teach the use of the Internet for the purpose of accessing a "management system" for handling car reservation and car return as claimed by Claims 3 and 1, from which Claim 5 depends. The portion of the disclosure of Haynes et al. cited in support of rejection teach reservations but not returns. (Haynes et al., paragraph 0020, relied on in the Office Action at 4)

Regarding Claim 6, the Examiner has incorrectly determined that Haynes et al. suggest "wherein the key generation system stores a digital key on a storage device provided by a prospective renter." (Claim 6, lines 1-2) The portion of the disclosure of Haynes et al. cited in support of rejection, however, does not teach Claim 6's requirements of key generation or using a digital key. (Haynes et al., paragraphs 0054-57, relied on in the Office Action at 4)

Regarding Claim 7, which depends from Claim 6, the Examiner has incorrectly concluded that Obradovich et al. suggest the requirement, "wherein the storage device is a smart card." (Claim 7, line 1) Obradovich et al., however, do not teach the use of a smart

card in conjunction with a key generation system or a digital key, as in Claim 7. Instead, Obradovich et al. teach the use of electronic information cards ("E-cards") to store user profile data. (Obradovich et al., paragraph 0011)

Regarding Claim 8, which depends from Claim 6, Obradovich et al. do not suggest the requirement, "wherein the digital key comprises car and user identification (ID) signed by the management system to authenticate the digital key." (Claim 8, lines 1-2) The portion of the disclosure of Obradovich et al. cited in support of rejection teaches a credit card transaction system rather than a digital car key. (Obradovich et al., paragraphs 0094-95, relied on in the Office Action at 5) The portion of the disclosure of Obradovich et al. cited in support of rejection also teaches the use of "a private key stored in the host computer" to encrypt data stored on an E-card. This does not suggest the digital automobile key requirements of Claim 8, because the encrypted E-card of Obradovich et al. is used in conjunction with data transmitted to the automobile. (Obradovich et al., paragraphs 111, relied on in the Office Action at 5) This is inconsistent with the requirement of Claim 1 (from which Claim 8 indirectly depends) that "there exists no data communications link between the fleet of cars and the management system," (Claim 1, lines 9-10), as discussed above.

Regarding Claim 9, Obradovich et al. do not suggest the requirement, "wherein a renter of a car invalidates a valid digital key upon returning a car to the car rental system and presents an invalidated digital key to the key return system to complete a car return." (Claim 9, lines 1-3) Instead, the portion of the disclosure of Obradovich et al. cited in support of rejecting Claim 9 teaches the use of an access code in conjunction with a "wireless communications connection" between a rental car and a host computer, with no provision for invalidating a digital key prior to contact with a key return system. (Obradovich et al., paragraph 106, relied on in the Office Action at 5)

Regarding Claim 10, Obradovich et al. do not suggest the requirement, "wherein the invalidation of a valid digital key includes storing car status information relevant to computing by the key return system a receipt for the renter." (Claim 10, lines 1-3) To the

contrary, the portion of the disclosure of Obradovich et al. cited in support of rejection does not teach invalidating a digital key. Obradovich et al. instead teach the handling of encrypted data in a manner that is inconsistent with the base claim requirement that "there exists no data communications link." (Claim 1, line 9):

> [T]he car rental agent causes transmission of the encrypted E-card information, along with the E-card identification, from PCD 120 to PCD 130. The latter stores the received information in a Vehicle Access record therein.
>
> When the temporary driver locates and picks up the subject vehicle, the driver may use PCD 130 to transmit the Vehicle Access record therein to the automobile system of the subject vehicle through wireless or Bluetooth communications.

(Obradovich et al., paragraphs 0111-12, relied on in the Office Action at 5)

Regarding Claim 20, Obradovich et al. do not suggest the requirement, "wherein each of said fleet of cars has a storage device for storing a record of the digital key." (Claim 20, lines 1-2) The portion of the disclosure of Obradovich et al. cited in support of rejection instead teaches validation of a user's digital signature over an IP-based network. (Obradovich et al., paragraph 00097, relied on in the Office Action at 10) Implementation of this approach would be inconsistent with the base claim's requirement that "there exists no data communication link between the fleet of cars and the management system." (Claim 1, lines 9-10)

Claim 11

Applicants traverse the rejection of independent Claim 11 on the basis that the requirements of Claim 11 are not suggested by Haynes et al. in view of Obradovich et al.

The Examiner has incorrectly determined that Haynes et al. suggest the requirement of Claim 11 for a step of "checking by the reservation server an availability of a requested car and, if a car is available, creating by the reservation server a digital key

by car and user information with a digital signature of the reservation server." (Claim 11, line 7) (emphasis added) To the contrary, the portion of the disclosure of Haynes et al. cited in support of rejection teaches the online payment of vehicle rental charges without regard to a digital key or digital signature. (Haynes et al., paragraphs 0075-78, relied on in the Office Action at 6)

Recognizing that the disclosure of Haynes et al. does not suggest the requirements of Claim 11 of

> downloading the digital key to a portable storage device, the portable storage device being used to gain access to a rental car without communication between the rental car and the reservation server

(Claim 11, lines 10-13) (emphasis added), the Examiner has relied on Obradovich et al. to make up for the deficiency. The portion of the disclosure of Obradovich et al. cited in support of rejection, however, does not teach use of a digital key to gain access to a rental car without communication between the rental car and the reservation server. Obradovich et al. teach the use of an access code incorporated in a header of an E-card, such that a host computer transmits all of the E-card information to an automobile system in the subject vehicle via a wireless communications connection. (Obradovich et al., paragraph 106, relied on in the Office Action at 6)

To the extent the Examiner has relied on the assertion that "this feature is well-known in the art" (Office Action at 6) without reference to Haynes et al. or Obradovich et al., Applicants traverse on the basis that this would constitute impermissible hindsight and an improper assertion of technical fact in an area of esoteric technology without support by citation of any reference work. *See* M.P.E.P. § 2144.03, citing *In re Ahlert*, 424 F.2d 1088, 1091, 165 U.S.P.Q. 418, 422-21 (C.C.P.A. 1970).

Claims Depending from Claim 11

Applicants traverse the rejection of dependent Claims 12-20 on the basis that the claims should be allowed as depending from allowable Claim 11. Set forth below are

additional grounds for traversal of the rejection of Claims 16-17

Regarding Claim 16, the Examiner has incorrectly determined that Obradovich et al. suggest the steps of

> inserting the portable storage device by a car renter into a slot for receiving the portable storage device in a rented car;
>
> upon detecting the portable storage device inserted into the slot, obtaining by an access controller installed in the rented car the digital key stored on the portable storage device and checking by the access controller whether the digital key is valid and verifying the signature on the digital key;
>
> if the digital key is valid and the signature is verified, the access controller then prompting the car renter to enter his or her identification and checking for correctness of the car renter's identification; and
>
> if the enter identification for the car renter matches a correct identification on the portable storage device, the access controller activating instruments of the car which the car renter is authorized to have access to.

(Claim 16, lines 2-13) The vehicle-installed access controller of Claim 16, which is capable of validating a digital key, must be understood as consistent with the requirement of Claim 11 (from which Claim 16 depends) that access to a rental car is gained without communication between the rental car and a reservation server. (Claim 11, lines 11-12) By contrast, Obradovich et al. teach validation methods which require access to the Internet or another network. (Obradovich et al., paragraph 0097-98 and 103-04, relied on in the Office Action at 8-9)

Regarding Claim 17, the Examiner has incorrectly determined that Obradovich et al. suggest the steps of

> upon receiving a car renter's request to return a car, prompting the car renter to insert his or her portable storage device into the slot for the

portable storage device;

obtaining by the access controller car status information and car identification;

creating by the access controller a return packet by combining car status information and the current digital key;

signing the return packet by the access controller, appending the car identification to the signed return packet, and saving the signed return packet into the portable storage device; and

invalidating by the access controller a current digital key.

(Claim 17, lines 2-10) Obradovich et al. do not, however, teach the use of the "access controller" required by Claim 17. As discussed in connection with Claim 16, from which Claim 17 depends, the vehicle-installed access controller must be consistent with the requirement of Claim 11 (from which Claim 16 depends) that access to the rental car is gained without communication between the rental car and the reservation server. (Claim 11, lines 11-12) Obradovich et al. expressly teach methods which require access to the Internet or another network. (Obradovich et al., 0115-16 and 0118)

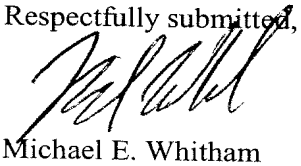
Conclusion

In view of the foregoing, it is respectfully requested that the application be reconsidered, that Claims 1-20 be allowed, and that the application be passed to issue.

Should the Examiner find the application to be other than in condition for allowance, the Examiner is requested to contact the undersigned at the local telephone number listed below to discuss any other changes deemed necessary in a telephonic or personal interview.

A provisional petition is hereby made for any extension of time necessary for the continued pendency during the life of this application. Please charge any fees for such provisional petition and any deficiencies in fees and credit any overpayment of fees to Attorney's Deposit Account No. 50-2041.

Respectfully submitted,



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